

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Claims 1-31 (Cancel)

32. (New) A vertical wall structure comprising:

a foundation wall that has a length and a width;

a plurality of individual, generally uniform-sized straw bales stacked a plurality of courses high on said foundation wall wherein said bales have the general shape of a regular parallelepiped having a width, a height and a length terminating in opposing ends and said bales are stacked on said foundation wall with their lengths aligned with the length of said foundation wall;

a plurality of vertically oriented bracing ladders attached to the foundation wall at spaced apart locations along the length of the foundation wall wherein each said ladder is a truss formed by a pair of spaced apart rails and connecting struts affixed between said rails with said struts and rails lying in a common plane and the space between said rails being greater than the width of said bales, said ladders being disposed at locations on said foundation wall whereby the common plane of said ladders is transverse to the length of said foundation wall and generally parallel to the ends of said bales and wherein said ladder struts are located between said rails in a pattern that includes openings between said rails large enough for a said bale to pass through; and

wherein a ladder strut of each said bracing ladders is abutted by the end

of at least one said bale and each said bracing ladder surrounds at least one said bale between its rails.

33. (New) The internal bracing system of claim 32 wherein, relative to said bale that is surrounded by a said bracing ladder, the rails of said ladder are located at either side of the approximate mid-length of said bale.

34. (New) The internal bracing system of claim 32 wherein, for each said bale that is surrounded by a said bracing ladder, there is a said bale in an adjacent course that abuts a strut of said ladder.

35. (New) The internal bracing system of claim 32 wherein said bracing ladders are spaced apart along the said foundation wall a distance of at least approximately three bale lengths whereby at least one said bale between adjacent bracing ladders is a mid-bale that neither abuts a ladder strut nor is surrounded by a said bracing ladder.

36. (New) The wall structure of claim 32 wherein said bales are stacked in a running bond.

37. (New) The wall structure of claim 36 further comprising:

a plurality of X-shaped spars disposed at the ends of said mid-bales and having opposing pairs of legs that straddle the approximate mid-section of any said bale in an adjacent course above and below the end of said bale at which said spar is located.

38. (New) The wall structure of claim 37 further comprising:

anchor dowels affixed in the foundation wall at locations between the locations of said bracing ladders and extending vertically upwardly from said

foundation wall; and

connecting rods attached to and extending vertically upwardly from an anchor dowel and attached to a plurality of said X-shaped spars.

39. (New) A method of constructing a wall having a core of straw bales comprising:

onto a foundation wall that has a length and a width, affix a plurality of vertically oriented bracing ladders at spaced apart locations along the length of the foundation wall wherein each bracing ladder is a truss formed by a pair of spaced apart rails and connecting struts with the struts and rails lying in a common plane, with bracing ladders being oriented such that the common plane of the ladders is transverse to the length of the foundation wall and generally parallel to the width of the foundation wall and wherein the ladder struts are located between the ladder rails in a pattern that includes openings between the rails large enough for a bale to pass through;

stacking onto the foundation wall and among the bracing ladders a first course of a plurality of individual, generally uniform-sized straw bales having the general shape of a regular parallelepiped with a width, height and length terminating in opposing ends wherein the bales are placed end-to-end with their lengths parallel to the length of the foundation wall and, further, wherein some of the straw bales of the first course are placed such that one of their ends abuts a bracing ladder strut and others of said straw bales extend between the rails of a bracing ladder to the extent that the rails are located approximately at the mid-length of that bale;

stacking onto said first course of bales and among the bracing ladders a second course of bales generally identical in size and shape to the bales of the first course wherein some of the straw bales of the second course are placed such that one of their ends abuts a bracing ladder strut and others of said straw bales extend between the rails of a bracing ladder to the extent that the rails are located approximately at the mid-length of that bale;

continuing to add courses of straw bales of generally identical size and shape to the bales of the first course onto the next previous course and among the bracing ladders as with the previous course until the desired height of the wall is reached whereby, for each bracing ladder, each successive course of bales will alternate between having a bale that abuts a ladder strut and a bale that extends through the ladder such that the rails of the ladder are located approximately at the mid-length of that bale.

40. (New) The method of claim 39 wherein the bails are stacked in a running bond; and

while stacking bales to form the next course, placing an X-shaped spar having opposing pairs of legs at the approximate mid-length of one or more bales in the previous course by straddling the bale with one pair of legs of said spar; and

connecting all vertically aligned spars legs together and to the foundation wall.